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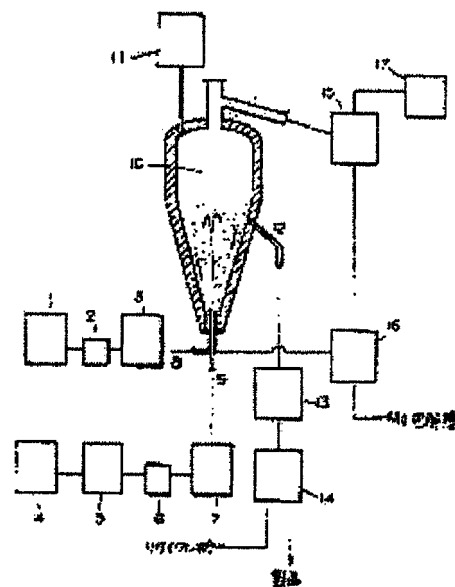
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(54) PRODUCTION OF METAL FROM METAL HALIDE

(57)Abstract:

PURPOSE: To produce a homogeneous and high-purity metal continuously by reducing a metal halide on the surfaces of metal particles in a suspended state by a reducing agent metal to fix and grow the metal in a reaction vessel in which the temp. below the m.p. of the metal and an adequate pressure are maintained.

CONSTITUTION: The metal particles of Ti, etc., for forming nuclei as reaction nuclei are charged from a hopper 11 into the reaction vessel 10. On the other hand, the metal halide such as $TiCl_4$ is heated to evaporate in an evaporator 3 and is supplied to the reaction vessel 10 from the lower part thereof. The reducing agent metal such as Mg is simultaneously evaporated in an evaporator 7 and is supplied into the reaction vessel 10. These two vapors are blown up from below the above-mentioned metal particle groups and are suspended to form a suspension bed. The temp. in the reaction vessel 10 is kept below the m.p. of the formed metal and the pressure therein is maintained below the vapor pressure of the reducing agent metal and metal halide at said temp. The reduction reaction of the metal halide is thereby progressed on the surfaces of the metal particles as the reaction nuclei to fix and grow the formed metal such as Ti. The metal particles fixed with this formed metal are continuously withdrawn from an overflow pipe 12.



LEGAL STATUS

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